

200

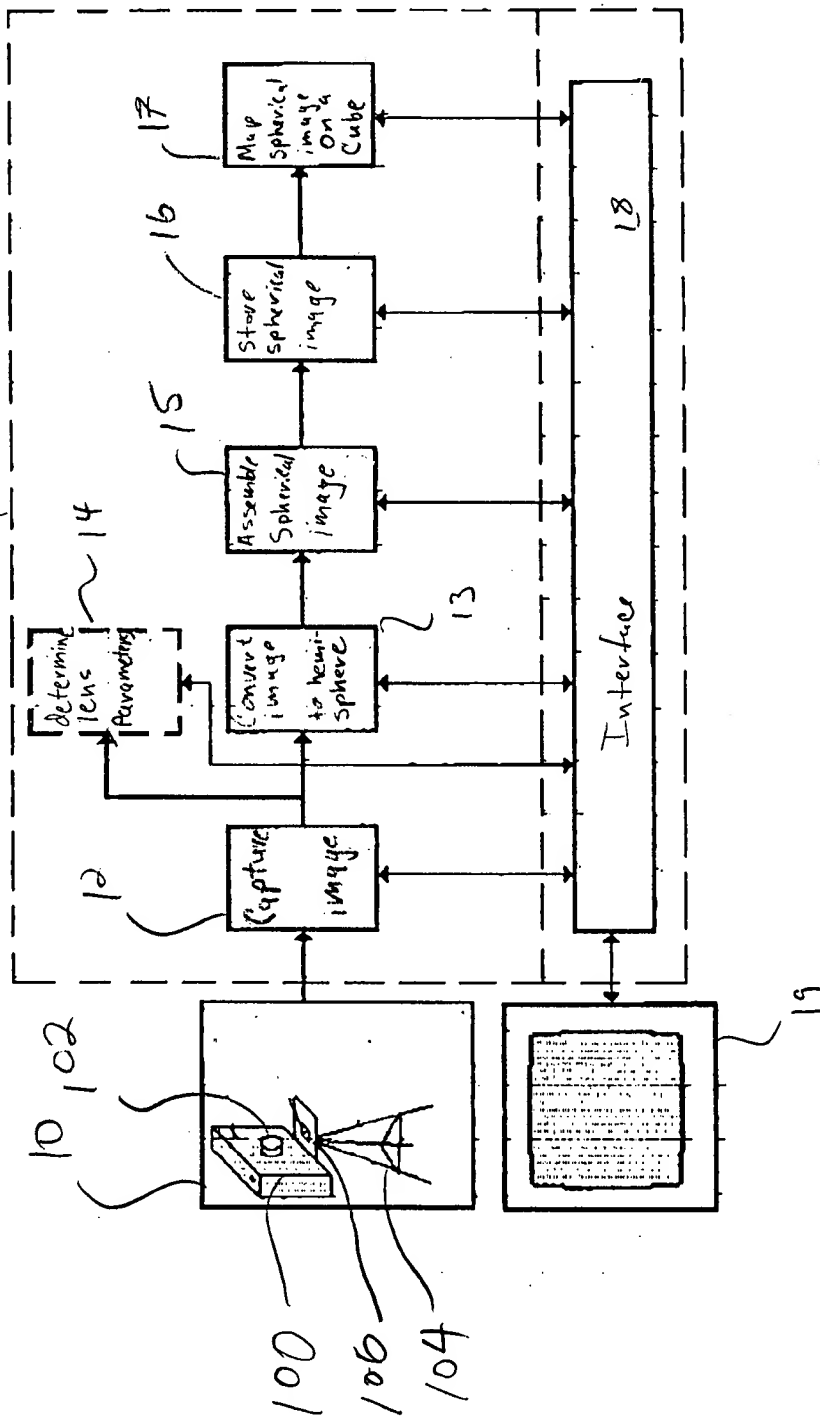


FIG. 1

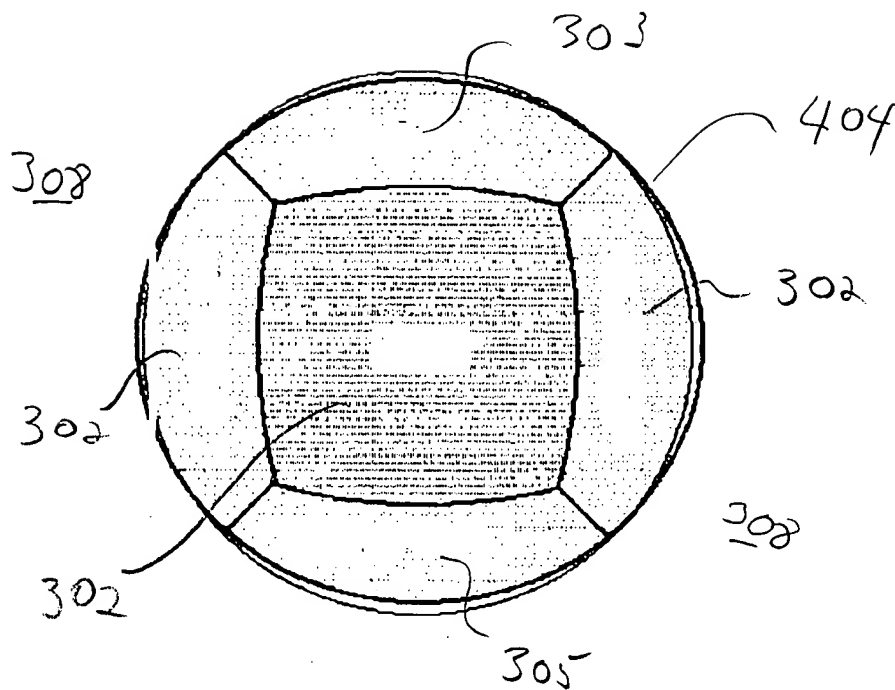


FIG. 2

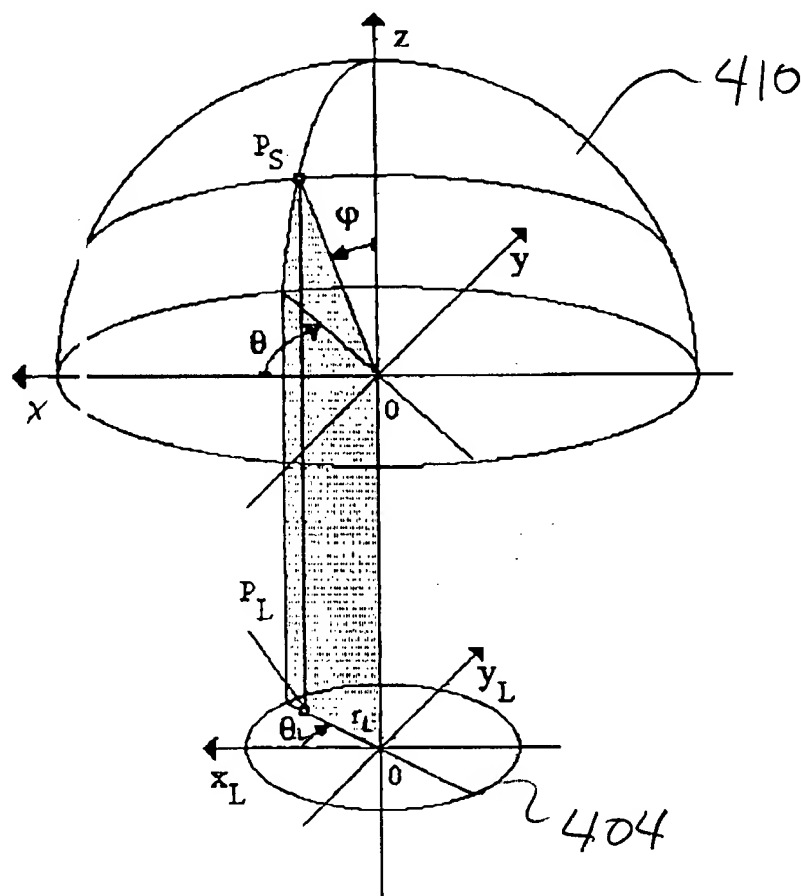


FIG. 3

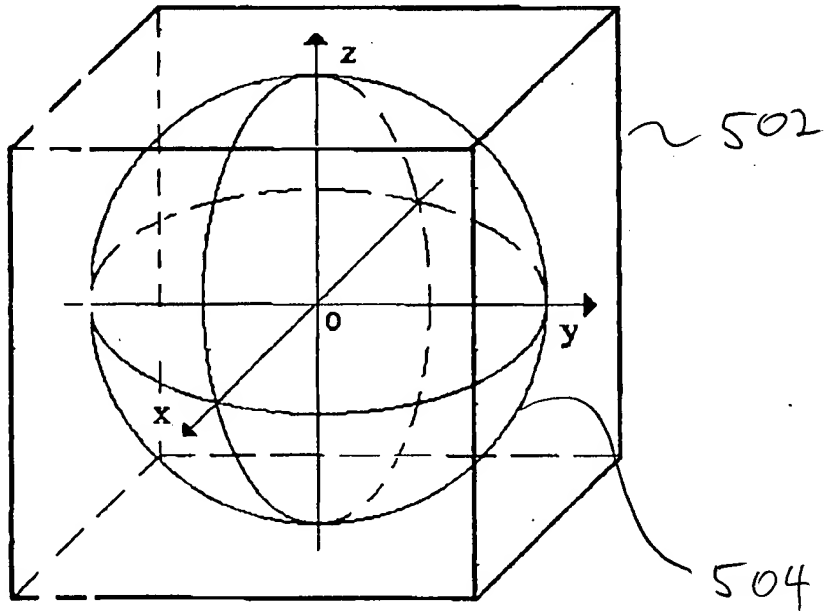


FIG. 4

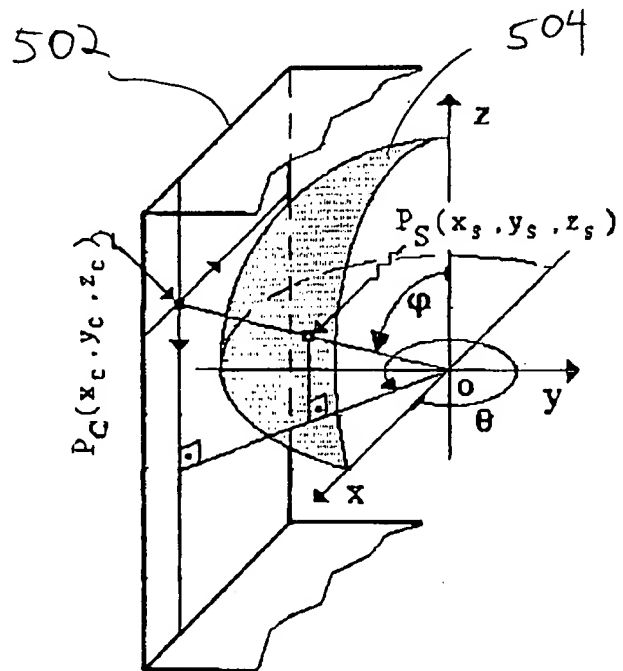


FIG. 5

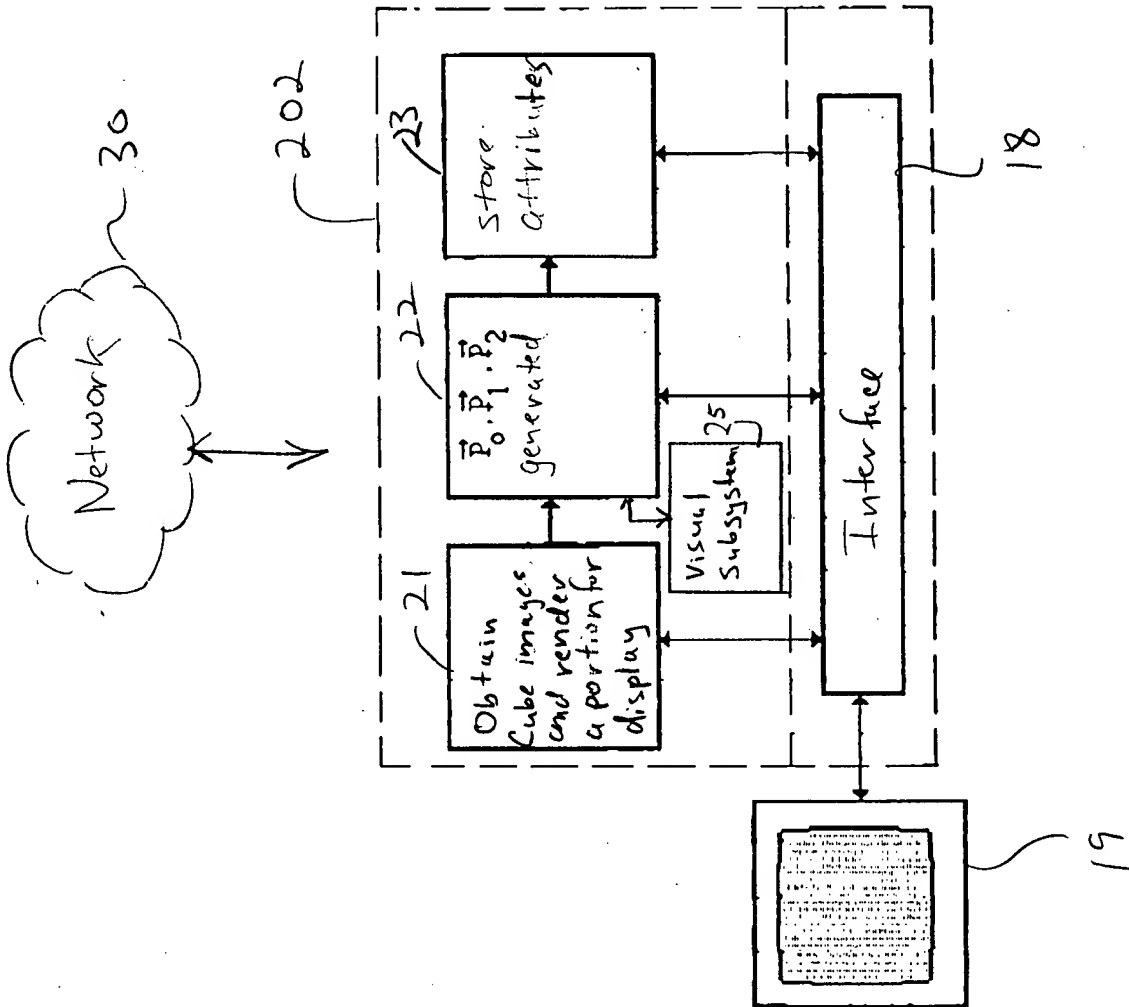


FIG. 6

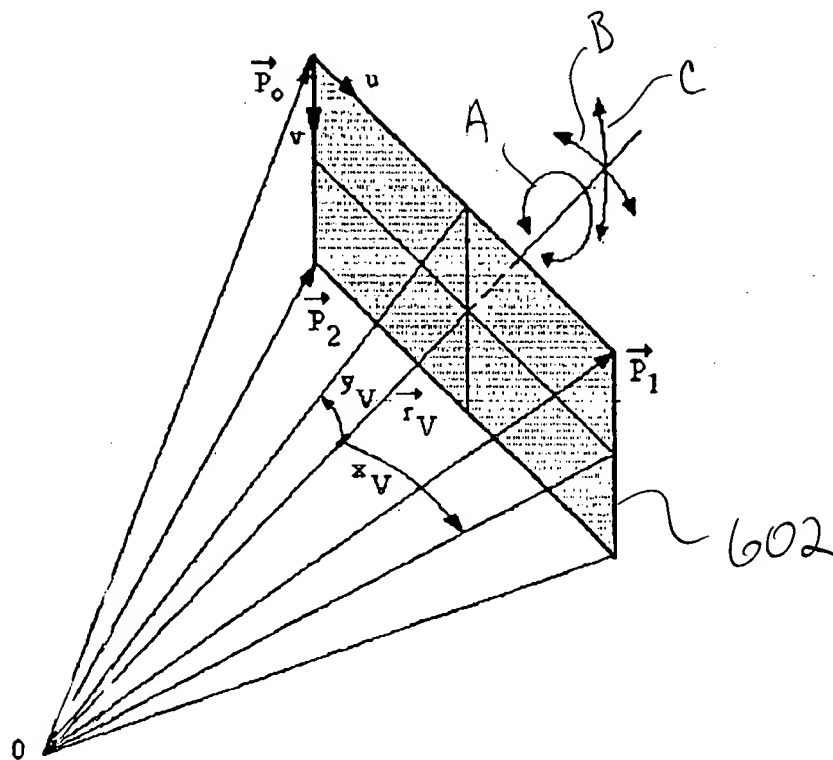
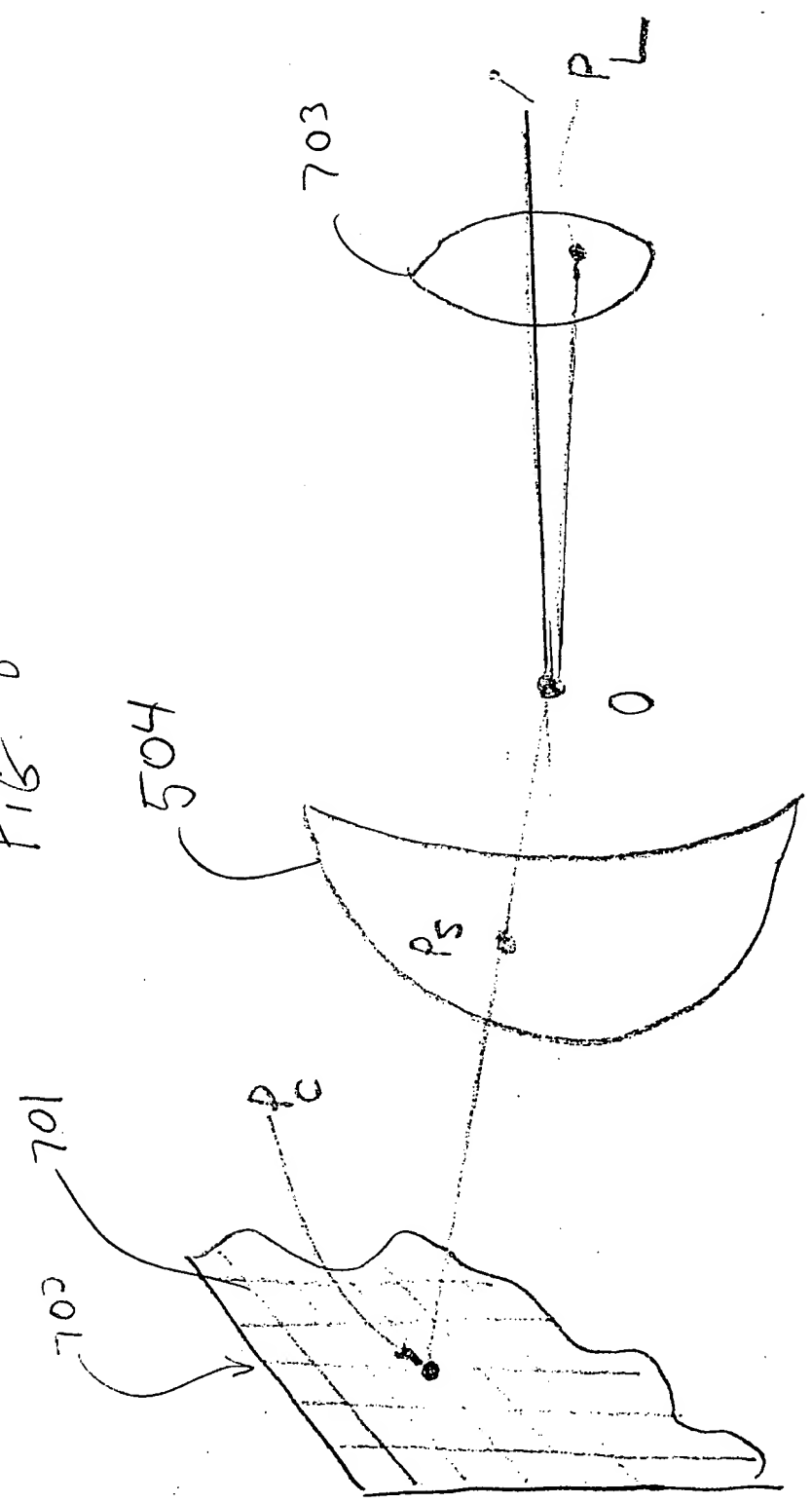


FIG. 7

FIG. 8 is a schematic diagram of a system for measuring the position of a point on a surface. The system includes a light source 701, a collimating lens 702, a sample surface 504, a detector 703, and a lens 704. A point P on the surface is imaged through the lens 704 to form a spot on the detector 703. The optical axis is labeled PL.

Fig. 8



Account for radial distortions

801

Account for geometric distortions by
determining the center of the image - 802

Filter images to black
and white

805

Cover image with
more light and
approximate the
center of the image

807

Maintain the center of
the image as the point
where the most rays
are equal

809

Eliminate rays for the
poles of the image

811

Account for color,
brightness, etc. distortions

814

Fig. 9